WA 8967
5/19/2014
4A

RCRA Compliance Inspection Report

U.S. Department of Energy Hanford

400 Area, 242A Evaporator Unit, WSCF Laboratory

Richland, Washington

WA7890008967

May 19-21, 2014

FILE COPY

Jack Boller
RCRA Compliance Officer
U.S. Environmental Protection Agency
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8/6/2014
Report Date

Cheryl Williams
Peer Review Signature

8/4/2014
Date

Table of Contents

Disclaimer

This report is a summary of observations and information gathered from the facility at the time of the inspection. The information provided does not constitute a final decision on compliance with RCRA regulations, nor is it meant to be a comprehensive summary of all activities and processes conducted at the facility.

Section A: Basic Facility and Inspection Information

Facility Information

Handler Name:	U.S. Department of Energy Hanford
Handler ID Number:	WA789008967
Facility Contact/Title:	Cliff Clark, Regulatory Compliance Manager
Facility Location Address:	Hanford Facility, Richland Washington
Facility Mailing Address:	P.O. Box 550, Richland, Washington 99352-0550
Contact Phone Number:	(509) 376-9333
Contact Email Address:	clark.cliff@rl.doe.gov
GPS Coordinates of Site:	Lat: 46.565007 Long: -119.511100

Inspection Information

Inspection Type:	Focused Compliance Inspection (FCI) for the 400 Area, 242A Evaporator, and WSCF Laboratory		
Inspection Date:	May19, 2014	May 20, 2014	May 21, 2014
Arrival Time:	1:00 pm PDT	8:30 am PDT	9:00 am PDT
Departure Time:	4:30 pm PDT	4:00 am PDT	9:30 am PDT
Inspection Team:	Jack Boller, RCRA Compliance Officer, EPA Michael Prescott, EPA Contractor Kathy Conaway, Ecology Nancy Ware, Ecology Edward Holbrook, Ecology		

Section B: General Facility Information

Owner/Operator Information: The owner of the facility is the United States Government. The primary operator is the U.S. Department of Energy (DOE). The DOE uses multiple contractors to manage the facility and conduct various onsite activities. DOE has designated CH2MHill Plateau Restoration Company (CHPRC) as the primary contractor responsible for the management of the 400 Area. The primary contractor for management of the 242A Evaporator Unit is Washington River Protection Services (WRPS) and the contractor for the Waste Sampling and Characterization Facility Laboratory (WSCF) and the Centralized Consolidation and Recycling Center (CCRC) is Mission Support Alliance (MSA).

Site Location: The Hanford Nuclear Reservation is an approximately 600 square mile facility located in central Washington State immediately north of Richland, Washington. It is bounded on the north and east by the Columbia River. Immediately to the south of the Reservation is the Richland/Kennewick/ Pasco Tri-cities urban area. The area north of the river is the Hanford Reach National Wildlife Preserve. The surrounding areas to the east and west are sparsely populated agricultural land. According to EJSCREEN, the facility is not in an environmental justice area. There are areas within the facility that have cultural significance to various central Washington and central Oregon Tribes.

This inspection focused on the following three areas of the Hanford facility:
The 400 Area which is located in the south central portion of the Hanford facility approximately five miles from the southern boundary of the Hanford facility,
The 242A Evaporator Unit which is located near the center of the Hanford facility in the 200 East Area,
The WSCF Laboratory which is west of the Hanford 200 West Area. All of these sites are approximately 15 miles north of the southern boundary of the facility.

Background and Activities
400 Area: According to the Hanford Dangerous Waste Permit Application, Part A Form (see Attachment C) for the 400 area unit group, the 400 Area was the site of the Fast Flux Test Facility which began operating in 1982 and shut down in 1992. Mr. Dixon explained that since the shutdown of the Fast Flux Test Facility, DOE has maintained two hazardous waste storage units in the 400 Area. One of the units is the Fuel Storage Facility (FSF) Building 403. It is a one level steel frame metal sided building. Its dimensions are 112 ft x 90 ft x 40 ft. The other unit is the Interim Storage Area (ISA). It consists of a concrete pad and a metal storage shed. Mr. Cammann explained that the 400 Area is also the site of the Centralized Consolidation and Recycling Center (CCRC). Recyclable and universal waste from across the Hanford facility are sent to the CCRC for sorting, pre-shipment processing and shipment offsite to proper recycling facilities.

242A Evaporator Unit: The Hanford Dangerous Waste Permit Application, Part A Form (see Attachment C) for the 242A Evaporator unit group indicates the 242A Evaporator unit began operation in March 1977. According to Brian Von Bargen, the plant manager, this unit is used to treat mixed waste from the Double Shelled Tank (DST) System by removing water and most volatile organics thereby reducing the volume of waste being held in the DST System. He stated that mixed waste sludge in the Double Shelled Tank (DST) system (a Hanford mixed waste tank storage unit group) are pumped through piping to the evaporator feed tank. The sludge is heated in the feed tank and then introduced into the evaporator which is maintained at less than atmospheric pressure to facilitate low temperature evaporation of the water and organics. Water and organic liquids flash off the evaporator into the condenser unit above the evaporator where the water and organics are condensed and collected in a tank. The water is further treated in the onsite Effluent Treatment Facility (EFT). The sludge remaining after the removal of water and organics is sent back to the DST System. The Evaporator has been shut down for maintenance and repair since 2010. We were told by Mr. Von Bargen that DOE is going through the final test runs of the 242 Evaporator Unit prior to the start of processing waste in the unit again. Mr. Von Bargen told us that DOE plans to start operations in July 2014 and begin a campaign approximately one month later, in August.

WSCF Laboratory: According to Matt Mills, Lab manager (title?) WSCF provides laboratory services for analysis of wastes generated in the 200 areas of the Hanford facility. It has been operating since the mid-1990s. Mr. Mills told us that the laboratory will be permanently closed down beginning June 1, 2014 and samples will be sent to offsite laboratories for analysis.

Section C: Regulatory Information

Compliance History: The Hanford facility is a RCRA Significant Non-Complier (SNC). It has been in SNC status since the mid 1990's. For more details see the inspection report for the April 1, 2014 inspection.

Regulatory Status: The Hanford facility is a permitted Treatment, Storage, and Disposal facility as well as a large quantity generator of hazardous waste and a large quantity handler of universal waste. The Permit was originally issued by Ecology in 1994 and had an expiration date of September 27, 2004. DOE has filed an application to renew the Permit. Pursuant to the provisions found in WAC173-303-806(7)(a), DOE will continue to operate under the original Permit and modifications that are made to that permit until a new permit is issued, which is projected to happen in 2016.

The Permit has undergone several modifications. The current active Permit, including modifications, is Permit Revision 8C, Class 1 Modification, dated March 31, 2012 (Permit). It identifies multiple hazardous waste unit groups within the facility. Within each unit group, there may be several individual treatment, storage, or disposal units. The Permit has final status operating standards for some of the unit groups. The Permit requires those units that do not have final status permit standards to operate in compliance with the interim status standards until such time that final status permit standards are implemented for that unit. Final status permit standards can be implemented either through a permit modification or issuance of a new permit. The Part A of the Permit Application for each unit group identifies the activities being conducted in that unit group and wastes that are potentially being managed in the unit group.

Specific operating standards and conditions are specified in the current (March 31, 2012) Permit for both the 400 Area unit group and the 242A Evaporator. The current Permit also includes a Part A for each of these unit groups. The Permit identifies two container storage units in the 400 Area and describes the permitted treatment process for the 242A Evaporator.

In preparation for conducting this inspection, I reviewed the Permit, including Part A for both the 400 Area and the 242A Evaporator. During that review, I noted that in Section IV, of Part A, the Physical Location of the facility is given as 825 Jadwin, Richland, Washington. This is actually the address of the federal building in Richland which is approximately 5 miles away from the southern boundary of the Hanford facility and 10 miles from the 400 Area and 20 miles from the 242A Evaporator. WAC 713-303-803(3)(b) requires the Part A of the final facility permit application must include among other things the location, including latitude and longitude, of the facility. The Part A does not include latitude and longitude of the facility.

The WSCF has no treatment, storage or disposal units that are included in the March 31, 2012 permit. No part A form was required for the WSCF. As with all waste that is generated at the Hanford facility, waste that is generated in the WSCF is subject to the Large Quantity Generator (LQG) Standards

Site Hazardous Waste Information: According to the Part A's associated with the 400 Area and the 242A Evaporator Unit , the 400 Area is allowed to manage three characteristic dangerous wastes and one Washington State only dangerous waste, the 242A Evaporator is allowed to treat 26 characteristic wastes, six listed hazardous wastes, and two Washington State only dangerous wastes. During the inspection we observed that all of the wastes managed in these two units are classified as radioactive mixed waste. Radioactive mixed wastes are a combination of hazardous and/or dangerous waste mixed with radioactive waste. The Department of Energy, the Washington State Department of Health, the Washington State Department of Ecology, and the EPA all have regulatory authority over mixed waste. During the inspection we also observed that the WSCF Lab manages and generates waste that designates as a characteristic waste for ignitability, corrosivity, reactivity, heavy metals, and organic compounds and/or is listed for volatile and semi-volatile organic compounds.

Section D: Description of Inspection

Purpose of Inspection: This was a focused compliance evaluation inspection (FCI) of the 400 Area, 242A Evaporator, and WSCF. The entities were inspected to ensure compliance with the Hanford Facility Resource Conservation and Recovery Act Permit, Permit Revision 8C, Class 1 Modification, dated March 31, 2012 (Permit) and for compliance with the following regulations of Washington's federally authorized hazardous waste program: WAC 173-303-170 through 230 standards for hazardous waste generators; WAC 173-303-573 standards for universal waste; and WAC 173-303-515 requirements for management of used oil.

Inspection Entry and Opening Conference: On Friday May 16, 2014 at 10:00 a.m., I contacted Cliff Clark, the DOE Regulatory Compliance Manager, by phone. I told him that we would be inspecting the 400 Area, on May 19 and the 242A Evaporator and WSCF on May 20. I confirmed that we were planning to meet with him and other facility representatives at the Federal building in Richland at 1:00 p.m. on May 19 to begin the inspection.

The EPA members of the inspection team arrived at the Federal Building in Richland on May 19, 2014 around 1:00 pm. While receiving visitor passes and dosimeters we were joined by Cliff Clark, and Tony McKarns of DOE. They escorted us to a conference room. Around 1:10 p.m. I presented my inspector credentials and we began the opening conference. Twenty-one people were in attendance. DOE was represented by, among others, Cliff Clark, Tony McKarns, and Michael Collins. For a complete list of attendees, see the sign-in sheet in Attachment C or on the document disk at attachment D. Mr. McKarns and Mr. Collins accompanied us on the remainder of the inspection. Joel Williams, who is the primary contact for CHPRC also accompanied us on the 400 Area inspection. Michael Greene with WRPS accompanied us on the 242A Evaporator inspection. Jerry Cammann with MSA accompanied us on the CCRC and WSCF inspection.

In the opening conference, I explained that this would be an EPA lead inspection and that we would be evaluating compliance with the Permit and the Ecology federally-authorized Dangerous Waste Regulations. After answering a few logistical questions regarding file reviews and document requests we ended the opening conference and boarded a DOE bus for the trip to the 400 Area. Kathy Conaway, Nancy Ware, and Edward Holbrook from Ecology met us on site at the 400 Area and accompanied us on the inspection.

Inspection Summary:

During the tour of the 400 Area, the 242A Evaporator, and the WSCF, we looked at all of the storage and treatment units as well as all the less than 90 day waste accumulation areas that facility representatives identified as containing hazardous or mixed waste. We also looked at all points of hazardous waste generation identified by the facility representatives. Additionally, we looked for waste that was being generated or otherwise managed that had not been identified by facility representatives. We compared the dangerous waste management in these areas to the applicable permit or regulatory conditions to which the entities were subject.

The areas inspected are listed below. For each area we inspected we requested documents be sent to us for review following the onsite portion of the inspection. The list of documents requested is in Attachment C. The documents for the 400 Area were compiled by Mr. Williams, the documents for CCRC and WSCF were compiled by Mr. Cammann, and the documents for the 242A evaporator were compiled by Mr. Greene. Mr. McKarns of DOE placed all of the requested files on a disk and sent the disk to me on June 5, 2014. The disc is in Attachment D.

In addition to our observations, our sources of information for each area visited are given below.

Entities inspected:

400 Area:
Contacts: ISA and Fuel Storage Facility (FSF) Brian Dixon 400 Area Manager, MASF Aaron Young MASF operator , CCRC Candace Marple CCRC Manager

- ISA - 19 drums of mixed waste (one contained sodium potassium (NaK));
- FSF - two large metal boxes containing approximately 100 tubes, ten feet long, each holding 2.5 gallon thimbles containing two gallons of sodium metal mixed waste in an argon atmosphere. The two metal boxes were surrounded by thick concrete blocks to provide shielding from radiation (see Photo HPIM4813 below);

Photo HPIM4813 Large containers of alkali mixed waste in FSF

- 440 pad - SAA for non-recyclable galvanized aerosol cans, SAA for tritium contaminated broken exit signs, PPE;
- Maintenance and Storage Facility (MASF) - universal waste lamps, battery accumulation area, SAA for broken mercury thermostat;
- Building 4802 - universal waste lamps and batteries;
- Building 4802 - accumulation container for aerosol cans pending waste determination;
- Centralized Consolidation Recycling Center (CCRC) - aerosol can puncture unit, universal waste and recyclables staging area.

242A Evaporator:
Process information from Brian Von Bargen. Waste information and tour lead was John Guberski.

- Less than 90 day accumulation area outdoor gravel pad on north side of 242 building (no waste present);
- Less than 90 day accumulation area outdoor gravel pad on south side of 242 building (one empty metal box that Mr. Guberski said was used to accumulate waste during maintenance work).

WESCF:
Process information from Matt Mills. Tour and waste information from Melanie Myers.

- SAA containers attached to lab instruments in Lab N3 and N5;
- SAA containers in hoods and store rooms N10, N12, N24, and N29;
- Less than 90 day accumulation room N24 in lab building;

•Universal waste lamps and batteries in building HS 029;
•Less than 90 day building behind lab building

Inspection logs and waste shipment manifests for WSCF were reviewed onsite.

Any issues that were identified involving potential non-compliance with permit/interim status and/or generator requirements are discussed below. For any areas that were inspected that are not discussed below no compliance issues were found, at the time of the inspection.

400 Area

We arrived at the 400 Area at 2:15 pm on May 19, 2014. We met with the 400 Area personnel outside the gate of the Interim Storage Area (ISA). The site manager Mr. Dixon gave a short safety briefing and explained that NaK waste was being stored in a drum in the ISA and solid sodium waste was being stored in two large metal boxes in the Fuel Storage Facility. He explained that in response to a previous EPA/Ecology inspection both the ISA and the FSF are being inspected weekly and emergency response equipment had been placed in the area permanently.

At the time of the inspection, Mr Dixon told us in the 400 Area that wastes being managed in the two 400 Area storage units were no longer being generated and waste was not being added to the permitted storage units (the ISA or the FSF). Small amounts of dangerous waste from building maintenance activities were being accumulated in satellite accumulation areas.

At the CCRC Ms. Marple stated that generators of universal waste across the Hanford facility have one year from the time of generation to move the waste to the CCRC and then the CCRC has one year from the time they receive the waste to get it off site. She stated that both EPA and the state had agreed to this as part of a site wide universal waste and recycling plan. This plan is not part of the Facility wide permit or other document that supersedes regulation. We reviewed the plan and although (1) it does state the generator and the CCRC can each accumulate universal waste for one year from the time they generate or receive the waste, the language of this plan is different from the regulations which state that a large quantity handler of universal waste may accumulate universal waste for longer than one year from the date the universal waste is generated if such activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal and the universal waste handler bears the burden of proving that such is the case. Implementation of this site wide plan could result in universal waste being accumulated on the Hanford site for more than one year from the date the universal waste was generated.

(2) Also, at the CCRC we observed a box of fluorescent lamps that was labeled universal waste lamps. The box was only partially closed on one end by tape so that the ends of some lamps were visible (see photo HPIM4825 below).

Photo HPIM4825 Open container of universal waste lamp at the CCRC

Containers holding of universal waste lamps must be structurally sound and remain closed. We also observed at least one box that contained florescent lamps that was labeled indicating the contents were universal waste lamps. The box had a large hole in its side. Large quantity handlers of universal waste accumulate lamps in containers or packages that are structurally sound and must lack evidence of damage that could cause leakage under reasonably foreseeable conditions.

242A Evaporator

At 8:00 a.m. on May 20, 2014 we met DOE representatives at the Federal Building and boarded a bus to the 242A Evaporator site. We arrived at the 242A Evaporator and were escorted to a meeting room for an opening conference to learn about the operations of the 242A Evaporator, associated tanks and equipment, and waste management practices. We were joined by the Ecology inspectors and personnel from the site. After the opening conference where Mr. Von Bargen described the current status of the evaporator and how it works, we conducted a tour of the unit. The tour was led by Mr. Guberski. During the tour of the 242A Evaporator we observed that the unit was not operating and there was no waste in the two accumulation areas.

WSCF

We arrived at the WSCF at 1:00 pm on May 20, 2014. After signing in we were escorted to a conference room for an opening conference to learn about the WSCF. Matt Mills explained that the WSCF was in the process of closing down and would cease operating on June 1, 2014. He explained that the purpose of the WSCF was to conduct analysis of samples in support of cleanup and waste management activities in the 200 areas of the Hanford facility. He stated that waste generated in the WSCF is managed in satellite accumulation areas (SAAs) and in two less than 90 day accumulation areas. He explained that for the inspection team to enter the laboratory area where the waste was being accumulated we would have to go through the ACE process which is required prior to entry into radiation zones. The process involves reading a site entry and safety plan and signing a form verifying that you read the plan. Once we completed this process, we began a tour of the WSCF.

In the WESCF laboratory we observed the waste that was being generated in the various labs was collected in satellite accumulation areas in those labs. Once the satellites in the individual labs were full, we were told by Ms. Myers, waste is moved to one of two less than 90 day accumulation areas.

We observed containers being used to collect waste from analytical instruments. Ms. Meyers stated that the waste is characteristic for either metals or solvents depending on the analysis that is being run. She further stated that they are managed as satellite accumulation areas (see photo HPIM4829 below). We noted that the containers were open and it was not clear whether the instruments were operating or if waste was being added to the containers. Following the inspection we received a letter by email from Mr. Mills confirming that the instruments were operating at the time of the inspection and waste was being added to the containers.

Photo HPIM4829 Open satellite accumulation containers in WSCF lab

In Building 6265 at WSCF we observed 17 boxes that Ms. Meyers said contained universal waste lamps. One of the boxes had a small unsealed gap in the flaps at the end of the box. Containers of universal waste lamps must be structurally sound and adequate to prevent breakage. Boxes of universal waste lamps must also remain closed and lack evidence of damage that could cause leakage under reasonably foreseeable circumstances. The boxes were all labeled and dated. (3)

Closing Conference: On May 21, 2014 we met with representatives of the Department of Energy and their contractors at 9:00 a.m. at the Federal building in Richland for a closing conference.

I expressed concerns regarding the open universal lamp containers and the open satellite accumulation containers at WSCF.

I stated that we might have more concerns once we received and reviewed the documents we requested.

I thanked the facility representatives for their time and cooperation and we ended the inspection at 9:30 a.m.

Post inspection record review: On June 11, 2014, following the onsite inspection, EPA received three disks containing documents that had been requested for further review. I reviewed all of the documents on the disks. Any issues that were identified during this review involving potential non-compliance with permit/interim status and/or generator requirements are discussed below. For any documents that were reviewed that are not discussed below no compliance issues were found.

Review of the waste inventory records for the ISA and FSF storage units indicate that all of the waste stored in these units has been in storage for more than a year. Specifically, of the 19 containers on the inventory for the ISA Unit two had been in storage since March 2008, three had been in storage since August 2008, and the remaining 14 had been in storage since June 2009. In the FSF unit both containers on the inventory had been in storage since July 2006. During the onsite inspection I asked Mr. Collins of DOE why the storage units had not been closed and why waste was still being stored in the 400 area several years after operations of the reactor and waste generating activities had ceased. He pointed out the need to maintain the waste in an argon atmosphere made it difficult to move the waste to a different location within the Hanford facility or send it offsite. He further stated that the long term plan for the 400 area includes demolition of the buildings, which he said will require some hazardous waste storage capacity. (4)

Through the TPA, EPA and Ecology allows storage of hazardous waste, for which there is no treatment technology, for periods exceeding one year provided that DOE develop either onsite or offsite treatment capacity by 2016, and the waste is on an agreed schedule for treatment to meet LDR standards by 2030. As part of this agreement DOE must file an annual report identifying for which waste treatment technology exists either onsite or offsite, what waste has been treated and what waste is awaiting treatment. In order to verify compliance with these requirements I reviewed the report for the period ending December 31, 2013. I noted that all the waste in storage at the 400 area ISA and FSF units as of December 31, 2013 was included in the last annual report. The report also indicated that for all of the waste that has been in storage at the 400 area units for more than one year, treatment technology exists offsite that could be used to treat the wastes to meet LDR standards. The report also indicates that treatment is not planned to begin until after 2018.

The regulations require that an owner/operator have a contingency plan at his facility for use in emergencies or sudden or nonsudden releases which threaten human health or the environment. In previous inspections of Hanford waste management units we learned that the RCRA contingency plan is "imbedded" into the Building Emergency Plan (BEP) for each unit group. I reviewed the BEP for the

400 area, 242-A evaporator, and WSCF. They each specify that "Sections 1.5, 3.1, 4.0, 7.1, 7.1.1, 7.1.2, 7.2, 7.2.1, 7.2.2, 7.2.3, 7.2.4,7.2.5, 7.2.5.1, 7.3 8.2, 8.4, 9.0, 9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 11.0, 12.0, and 13.0 of the BEP are enforceable sections meeting RCRA contingency planning requirements." I noted that the BEPs all refer to standards or procedures set out in the Hanford Contingency Management Plan, which covers the whole Hanford facility and references the BEPs. In addition to addressing releases of RCRA regulated waste, the HCMP includes procedures for addressing releases of non-RCRA regulated radioactive material and waste. No copy of this plan was provided.

5 In reviewing the BEPs for the 400 area, 242-A evaporator, and WSCF I noted that each BEP states that the building emergency director is the emergency coordinator and that a list of building emergency directors and their work phone number is included in Section 13 of the BEP. I observed that Section 13 of the BEP does not have a list of names of all persons qualified to act as the emergency coordinator. Instead, it only has as a single general phone number with no name. In case nobody is available to answer at the phone number, a second phone number is given to contact the Hanford Patrol to get a list of home phone numbers. Without a list of names of contacts it is unclear how the Hanford Patrol would know which home phone number to give out in an emergency.

ATTACHMENT A

Aerial Photo

USDOE Hanford (400Area, 242A Evaporator, WSCF)
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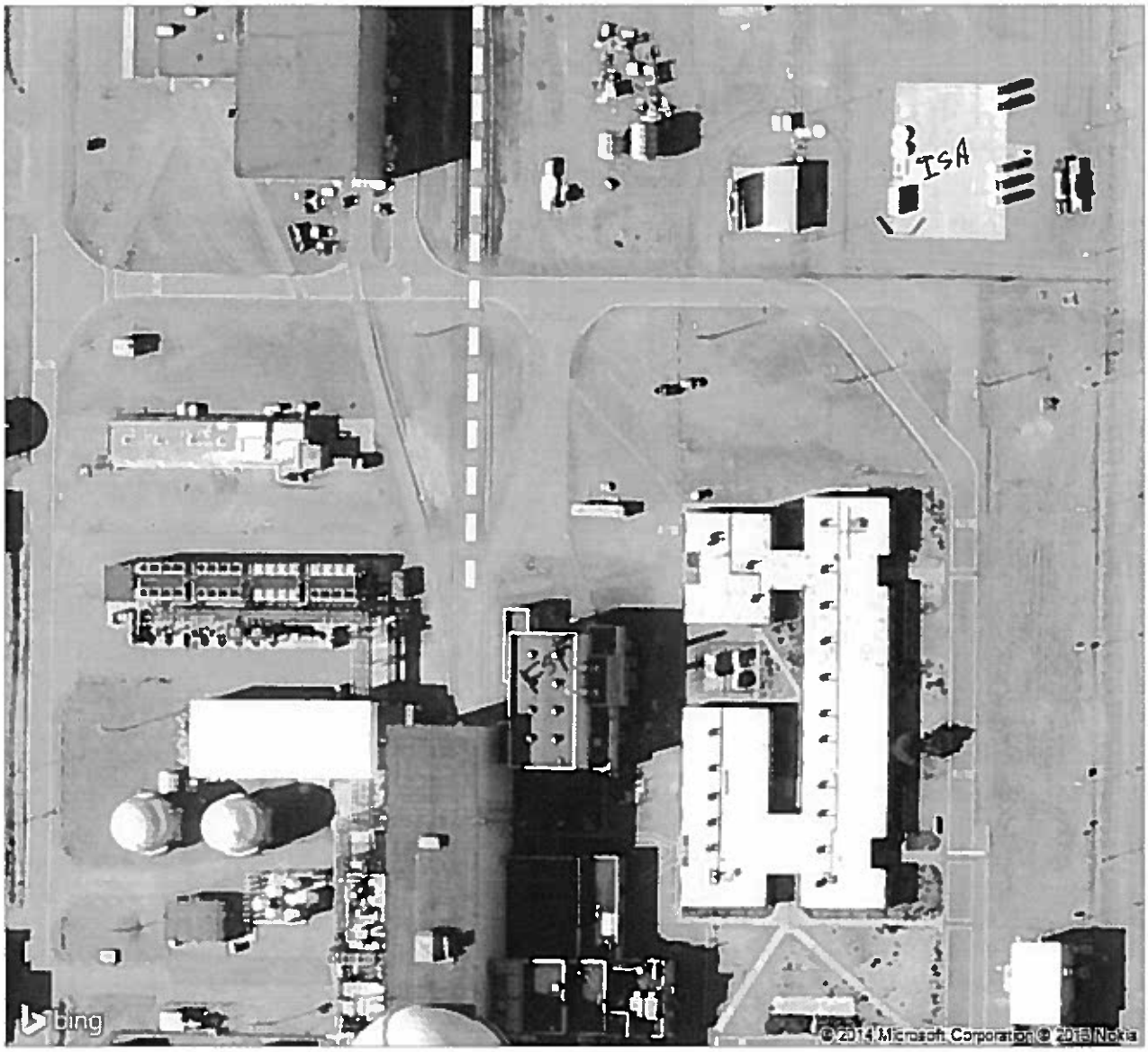
bing Maps

My Notes

400 Area

On the go? Use **m.bing.com** to find maps, directions, businesses, and more



Bird's eye view maps can't be printed, so another map view has been substituted.

bing Maps

My Notes

242A Evaporator

On the go? Use **m.bing.com** to find maps, directions, businesses, and more

Bird's eye view maps can't be printed, so another map view has been substituted.

bing Maps

My Notes

WSCF Lab

On the go? Use **m.bing.com** to find maps, directions, businesses, and more

Bird's eye view maps can't be printed, so another map view has been substituted.

ATTACHMENT B

Photo Log

USDOE Hanford (400Area, 242A Evaporator, WSCF)
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ATTACHMENT B: HANFORD FACILITY PHOTOGRAPH LOG
WA7 89000 8967
MAY 2014 RCRA Inspection
(All photographs were taken by Michael Prescott, EPA Contractor, on 5/19/14 and 5/20/14 using a Hewlett Packard Model M547 digital camera)

5/19/14 Photographs

1. HPIM4811 - Overview of HAZMAT Bldg. FFTF-001 with all doors open to show containers of wastes at the 400 Area Fuel Storage Facility (FSF).
2. HPIM4812 - View of containers of alkali mixed wastes in the left side of HAZMAT Bldg. FFTF-001 at the 400 Area FSF.
3. HPIM4813 - Overview of two large containers with alkali mixed wastes within concrete walls in the 400 Area Fuel FSF building.
4. HPIM4814 - Another view of the two large containers with alkali mixed wastes within concrete walls showing hazardous waste labels in the 400 Area FSF building.
5. HPIM4815 - View of two containers of hazardous wastes managed as Satellite Accumulation Areas (SAAs) at the 440 Pad at the 400 Area FSF.
6. HPIM4816 - View of box for accumulating batteries managed as universal wastes in Bldg. 437 at the Maintenance and Storage Facility (MASF).
7. HPIM4817 - View of box for spent lamps managed as universal wastes in Bldg. 437 at the MASF.
8. HPIM4818 - View of pail for broken mercury thermostat managed as universal wastes in Bldg. 437 at the MASF.
9. HPIM4819 - View of pails for spent lamps and batteries managed as universal wastes in Bldg. 4802 at the MASF.
10. HPIM4820 - View of aerosol cans, that have not been declared wastes, in a flammable locker in Bldg. 4802 at the MASF.
11. HPIM4821 - View of a container and two boxes of spent lamps managed as universal wastes in Bldg. 4802 at the MASF.
12. HPIM4822 - View of the aerosol can puncturing booth and the drum for accumulating the wastes from the cans in Bldg. 4734B Centralized Consolidation Recycling Center (CCRC).
13. HPIM4823 - View of numerous containers for accumulating various universal wastes in Bldg. 4734B CCRC.
14. HPIM4824 - View of another area showing numerous containers and boxes for accumulating various universal wastes in Bldg. 4734B CCRC.
15. HPIM4825 - A closer view of boxes of spent lamps managed as universal wastes that were not closed due to open hand holds or extending beyond the end of the box in Bldg. 4734B CCRC.

5/20/14 Photographs

16. HPIM4826 - View of 90-day accumulation area without any waste containers outside of the 242 Evaporator building.
17. HPIM4827 - View of a second 90-day accumulation area in the form of a metal box, that was empty, outside of the 242 Evaporator building.

18. HPIM4829 - View of open containers that were connected to instruments with hoses for accumulating wastes managed as a SAA in Rm. N3 in the Waste Sampling and Characterization Facility (WSCF).
19. HPIM4830 - View of additional open containers that were connected to instruments with hoses for accumulating wastes managed as a SAA in Rm. N3 in the WSCF.
20. HPIM4831 - View of drums for accumulating wastes managed as SAAs in Rm. N10 in the WSCF.
21. HPIM4832 - View of additional drums for accumulating wastes managed as SAAs in Rm. N10 in the WSCF.
22. HPIM4834 - View of containers for accumulating wastes managed as a SAA including a container of carbon disulfide (P-listed waste) in Rm. N24 in the WSCF.
23. HPIM4835 - View of containers for accumulating wastes in a flammable cabinet managed as a SAA in Rm. N24 in the WSCF.
24. HPIM4836 - View of drum for accumulating wastes managed as a 90-day accumulation area in Rm. N24 in the WSCF.
25. HPIM4837 - Overview of HAZMAT Bldg. HS-029 for accumulating aerosol cans and universal wastes at the WSCF.
26. HPIM4838 - View of boxes of spent lamps managed as universal wastes, one of which had a small open slit, in Bldg. 6266A at the WSCF.
27. HPIM4839 - View of some of the drums of wastes in the Bldg. 6265A 90-day accumulation area at the WSCF.
28. HPIM4840 - Overview of the Bldg. 6265A 90-day accumulation area at the WSCF.


HPIM4811.JPG


HPIM4812.JPG


HPIM4813.JPG


HPIM4814.JPG


HPIM4815.JPG


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ATTACHMENT C

Documents collected from the facility
Attendance Roster
Permit application form Part A
Document request lists

ATTENDANCE ROSTER

INSPECTION TITLE (MULTIPLE) EPA/ECOLOGY RCRA TSD AND WASTE GENERATOR INSPECTION		DATE May 19-21, 2014
		INSPECTION NUMBER 2014-042
AGENCY EPA/Ecology	MEETING LOCATION Federal Building/Room 340	FOLLOWUP TO N/A

ATTENDEES

NAME	COMPANY/ORG.	PHONE NUMBER
JERRY CAMMANN	MSA-EIS	376-1554
Jonathan Kon	MSA-WSCF	373-5366
Melanie Lyers	MSA WSCF-CHPCR	373-2688
Jon Perry	MSA ENV	376-4791
Edward Holbrook	Ecology	372-7909
Nancy Ware	Ecy	372-7912
Kathy Conaway	Ecology	372-7890
TONY MCKAINS	DOE	376-8981
Briana Colley	RJHEC/MSA/WSCF	373-7171
Lana Strickling	MSA	376-3583
Michael Prescott	EPA Contractor	703-323-3811
Jack Boller	EPA	206 553-2957
Harry Bell	DOE	376-2347
Matt Mills	MSA - EES	373-2785

WRPS
ATTENDANCE ROSTER

Subject: EPA / Ecology Inspection 242-A Evaporator Bldg And Unit- D.W.

Date: 05-20-2014

Leader: Michael Greene

NAME (Print)	Signature	Position/Title	Organization
Michael Greene		Insp Coord	WRPS
JAMES LYNCH		General Engineer	DOE-ORP
Phillip Udoma		Intern	DOE
Brian VanBurger		Area Mgr	WRPS
John D Gubersh		Env Spec	WRPS
Michael Prescott		EPA contractor	EPA
TONY MCKAINS		~~DOE~~ ENVIRONMENTAL	DOE
Hiram Mendoza		Exempt/WTS	WRPS
JERRY CAMMANN		MSA-EIS	MSA
Jack Boller		Inspector	EPA
JEFF VOOGD		MNGR ENV	WRPS
Edward Holbrook		Compliance	Ecology
Nancy Ware		Ecy/compliance	Ecy
DOUG SWENSON		WTS MGR	WRPS
Kathy Conaway		Ecology	Lead Compliance
Ron Clark		DOE ORP	FAC REP
Brian A. Johnson		SM	WRPS
John Conner		Process Eng	WRPS

A-6003-211 (REV 1)

ATTENDANCE ROSTER

INSPECTION TITLE (MULTIPLE) EPA/ECOLOGY RCRA TSD AND WASTE GENERATOR INSPECTION 400 AREA WMU (CHPRC)		DATE May 19-21, 2014
		INSPECTION NUMBER 2014-042
AGENCY EPA/Ecology	MEETING LOCATION Federal Building/Room 340	FOLLOWUP TO N/A

ATTENDEES

NAME	COMPANY/ORG.	PHONE NUMBER
Edward Holbrook	Ecology	509-372-7909
Nancy Ware	ECY	509-372-7912
Brian Dixon	CHPRC	376-7053
Kathy Conaway	Ecology	372-7890
Dave Gray	CHPRC-EP	376-5847
Aaron Young	CHPRC-MASF	376-9856
Daniel Turlington	CHPRC-FS	373-0176

WASHINGTON STATE DEPARTMENT OF ECOLOGY

Dangerous Waste Permit Application Part A Form

Date Received	Reviewed by:	Date: 09222008
Month Day Year	Approved by:	Date: 09222008
09192008		

I. This form is submitted to: (place an "X" in the appropriate box)

☒	Request modification to a final status permit (commonly called a "Part B" permit)
☐	Request a change under interim status
☐	Apply for a final status permit. This includes the application for the initial final status permit for a site or for a permit renewal (i.e., a new permit to replace an expiring permit).
☐	Establish interim status because of the wastes newly regulated on: (Date)
	List waste codes:

II. EPA/State ID Number

WA7890008967

III. Name of Facility

US Department of Energy – Hanford Facility

IV. Facility Location (Physical address not P.O. Box or Route Number)

A. Street

825 Jadwin

City or Town	State	ZIP Code
Richland	WA	99352

County Code (If known)	County Name
005	Benton

B. Land Type	C. Geographic Location Latitude (degrees, mins, secs)	Longitude (degrees, mins, secs)	D. Facility Existence Date Month Day Year
F	Refer to TOPO Map (Section XV.)		03 02 1943

V. Facility Mailing Address

Street or P.O. Box

P.O. Box 550

City or Town	State	ZIP Code
Richland	WA	99352

VI. Facility contact (Person to be contacted regarding waste activities at facility)		
Name (last)	**(first)**	
Brockman	David	
Job Title	**Phone Number (area code and number)**	
Manager	(509) 376-7395	
Contact Address		
Street or P.O. Box		
P.O. Box 550		
City or Town	**State**	**ZIP Code**
Richland	WA	99352

VII. Facility Operator Information		
A. Name		**Phone Number**
Department of Energy Owner/Operator CH2M HILL Plateau Remediation Company Co-Operator for 400 Area Waste Management Unit*		(509) 376-7395 (509) 376-0556*
Street or P.O. Box		
P.O. Box 550 P.O. Box 1600 *		
City or Town	**State**	**ZIP Code**
Richland	WA	99352

B. Operator Type F

C. Does the name in VII.A reflect a proposed change in operator? ☐ Yes ☒ No Co-Operator* change

If yes, provide the scheduled date for the change: Month 1 0 Day 0 1 Year 2 0 0 8

D. Is the name listed in VII.A also the owner? If yes, skip to Section VIII.C. ☐ Yes ☒ No

VIII. Facility Owner Information	
A. Name	**Phone Number (area code and number)**
David A. Brockman, Operator/Facility-Property Owner	(509) 376-7395
Street or P.O. Box	
P.O. Box 550	
City or Town	**State** / **ZIP Code**
Richland	WA / 99352

B. Owner Type F

C. Does the name in VIII.A reflect a proposed change in owner? ☐ Yes ☒ No

If yes, provide the scheduled date for the change: Month Day Year

IX. NAICS Codes (5/6 digit codes)

A. First		B. Second	
5 6 2 2 1	Waste Treatment & Disposal	9 2 4 1 1 0	Administration of Air & Water Resource & Solid Waste Management Programs
C. Third		**D. Fourth**	
5 4 1 7 1	Research & Development in the Physical, Engineering, & Life Sciences		

X. Other Environmental Permits (see instructions)

A. Permit Type	B. Permit Number	C. Description
E	AIR 06-1007	WAC 246-247, Radiation Protection – Air Emissions
E	AIR 10-4127	WAC 246-247, Radiation Protection – Air Emissions
E	UST 4511	WAC 173-216, State Waste Discharge Permit Program

XI. Nature of Business (provide a brief description that includes both dangerous waste and non-dangerous waste areas and activities)

The Fast Flux Test Facility (FFTF) was a 400-megawatt (thermal) liquid-metal cooled (sodium) research and test reactor located in the 400 Area of the Hanford Facility. The FFTF developed and tested advanced fuels and material for the Liquid Metal Fast Breeder Reactor program. The FFTF was constructed in the late 1970's and first went critical on February 9, 1980. FFTF operated successfully from 1982 to 1992. The Department of Energy (DOE) issued a shutdown order in December 1993, and since that time, the DOE has been de-fueling the reactor and deactivating systems, as they were no longer needed. Mixed waste stored in the 400 Area Waste Management unit can include elemental sodium (Na), sodium potassium (NaK) (D001, D003, WSC2) and sodium hydroxide and potassium hydroxide (D002); as well as debris (for example piping, equipment, and components) contaminated with Na or NaK, sodium hydoxide, or potassium hydroxide. The mixed waste stored in the 400 Area Waste Management unit is limited to wastes generated from the 400 Area. Mixed waste will be stored in containers (for example drums and boxes) until treatment capabilities are available.

Greater-than 90-day Storage Areas:

Fuel Storage Facility (Building 403)

The Fuel Storage Facility (FSF) is a one-level reinforced concrete substructure covered by a steel frame metal-sided high bay building. Building dimensions are 34 x 27 x 12 meters (112 x 90 x 40) high. The principal equipment in the FSF is a belowground cell containing a carbon steel storage vessel approximately 6.4 meters (21 feet) in diameter and 7.3 meters (24 feet) deep for storing up to 466 FFTF spent fuel assemblies in liquid sodium. Adjacent buildings and below-grade cells contain the natural draft heat exchanger used to cool the FSF pool. With the exception of two areas, which are radiation areas (cells 907 and 906); all accessible areas are Radioactive Material Areas. The process design capacity for the FSF is 1,000 gallons.

Interim Storage Area

The 400 Area Interim Storage Area (ISA) consists of 156 x 75 meters (513 x 247 feet) totally fenced area with perimeter lighting that has been designated for above ground dry cask storage of spent fuel. A concrete pad, which measures 27 x 37 meters (90 x 120 Feet), was used for cask storage. The process design capacity for the ISA is 19,000 gallons.

EXAMPLE FOR COMPLETING ITEMS XII and XIII (shown in lines numbered X-1, X-2, and X-3 below): A facility has two storage tanks that hold 1200 gallons and 400 gallons respectively. There is also treatment in tanks at 20 gallons/hr. Finally, a one-quarter acre area that is two meters deep will undergo *in situ vitrification*.

Section XII. Process Codes and Design Capacities								Section XIII. Other Process Codes							
Line Number		A. Process Codes (enter code)			B. Process Design Capacity 1. Amount	B. Process Design Capacity 2. Unit of Measure (enter code)	C. Process Total Number of Units	Line Number		A. Process Codes (enter code)			B. Process Design Capacity 1. Amount	B. Process Design Capacity 2. Unit of Measure (enter code)	C. Process Total Number of Units	D. Process Description
X	1	S	0	2	1,600	G	002	X	1	T	0	4	700	C	001	In situ vitrification
X	2	T	0	3	20	E	001									
X	3	T	0	4	700	C	001									
	1	S	0	1	20,000	G	003		1							
	2								2							
	3								3							
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1	9							1	9							
2	0							2	0							
2	1							2	1							
2	2							2	2							
2	3							2	3							
2	4							2	4							
2	5							2	5							

XIV. Description of Dangerous Wastes

Example for completing this section: A facility will receive three non-listed wastes, then store and treat them on-site. Two wastes are corrosive only, with the facility receiving and storing the wastes in containers. There will be about 200 pounds per year of each of these two wastes, which will be neutralized in a tank. The other waste is corrosive and ignitable and will be neutralized then blended into hazardous waste fuel. There will be about 100 pounds per year of that waste, which will be received in bulk and put into tanks.

Line Number	A. Dangerous Waste No.	B. Estimated Annual Quantity of Waste	C. Unit of Measure	D. Processes (1) Process Codes	D. Processes (2) Process Description [If a code is not entered in D (1)]
X 1	D 0 0 2	400	P	S 0 1 T 0 1	
X 2	D 0 0 1	100	P	S 0 2 T 0 1	
X 3	D 0 0 2				Included with above
1	D 0 0 1	30	T	S 0 1	Includes debris
2	D 0 0 2		T	S 0 1	Includes debris
3	D 0 0 3		T	S 0 1	Includes debris
4	W S C 2		T	S 0 1	Includes debris
5					
6					
7					
8					
9					
10					
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XV. Map

Attach to this application a topographic map of the area extending to at least one (1) mile beyond property boundaries. The map must show the outline of the facility; the location of each of its existing and proposed intake and discharge structures; each of its dangerous waste treatment, storage, recycling, or disposal units; and each well where fluids are injected underground. Include all springs, rivers, and other surface water bodies in this map area, plus drinking water wells listed in public records or otherwise known to the applicant within ¼ mile of the facility property boundary. The instructions provide additional information on meeting these requirements.

Topographic map is located in the Ecology Library

XVI. Facility Drawing

All existing facilities must include a scale drawing of the facility (refer to instructions for more detail).

XVII. Photographs

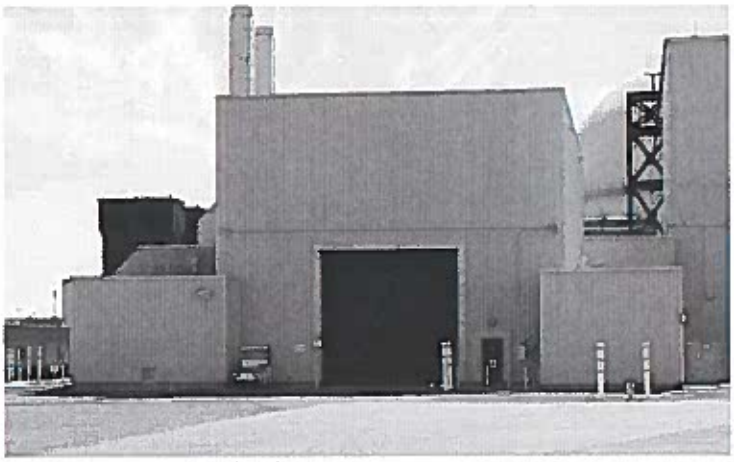
All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment, recycling, and disposal areas; and sites of future storage, treatment, recycling, or disposal areas (refer to instructions for more detail).

XVIII. Certifications

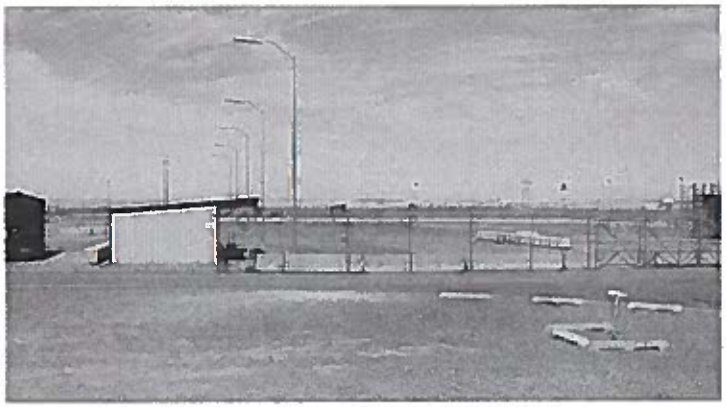
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Operator Name and Official Title (type or print)	**Signature**	**Date Signed**
David A. Brockman, Manager U.S. Department of Energy Richland Operations Office	Doug A. Shoop Jr	9/19/08
Co-Operator* Name and Official Title (type or print) John G. Lehew, III President and Chief Executive Officer CH2M HILL Plateau Remediation Company	**Signature**	**Date Signed** 9/2/08
Co-Operator – Address and Telephone Number* P.O. Box 1600 Richland, WA 99352 (509) 376-0556		
Facility-Property Owner Name and Official Title (type or print) David A. Brockman, Manager U.S. Department of Energy Richland Operations Office	**Signature**	**Date Signed** 9/19/08

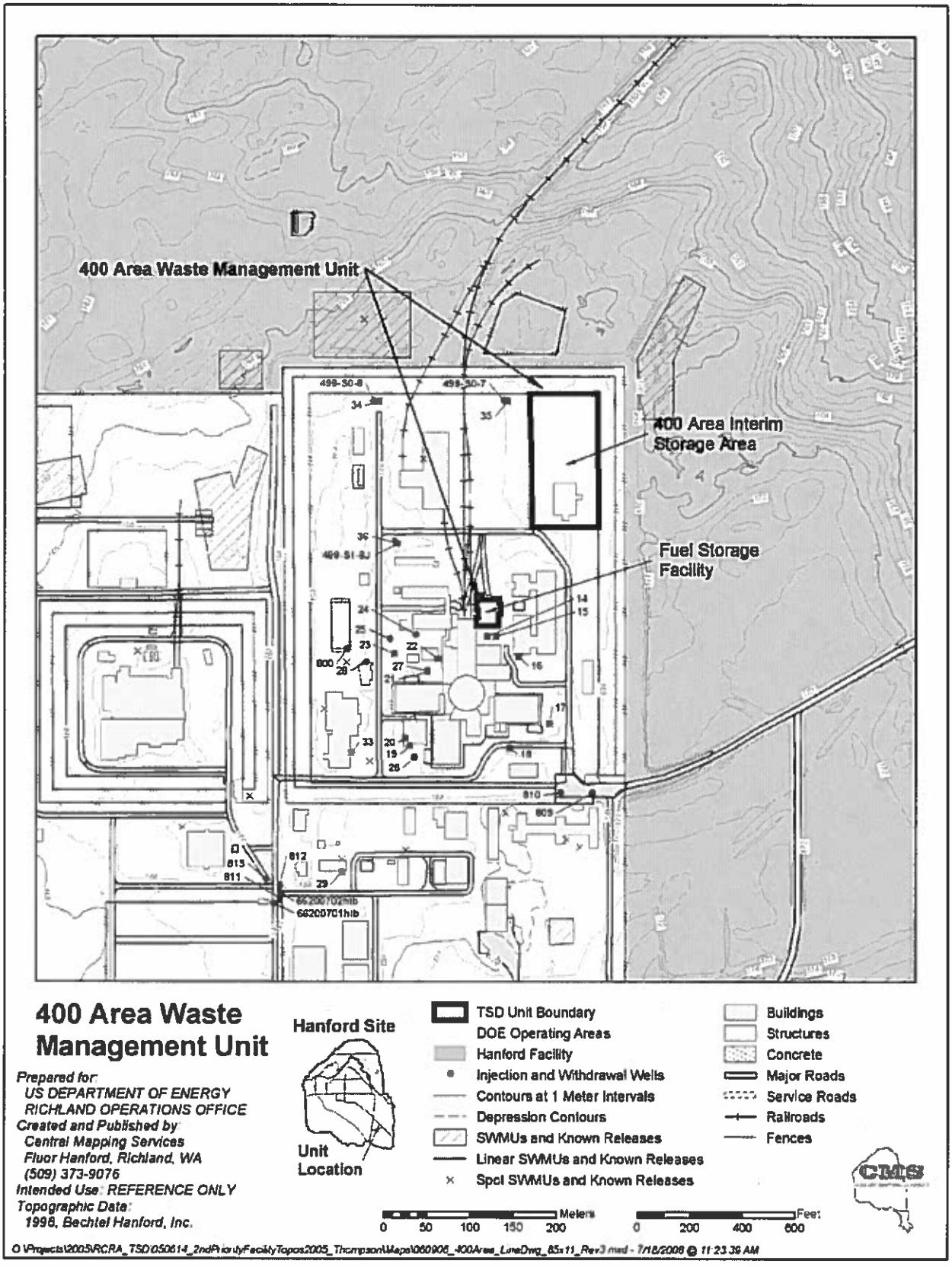
Comments



Fuel Storage Facility (FSF) 8-2006
Building 403



Interim Storage Area (ISA) 8-2006
Building 4718


400 Area Waste Management Unit
400 Area Interim Storage Area
Fuel Storage Facility
400 Area Waste Management Unit
Prepared for:
US DEPARTMENT OF ENERGY
RICHLAND OPERATIONS OFFICE
Created and Published by:
Central Mapping Services
Fluor Hanford, Richland, WA
(509) 373-9076
Intended Use: REFERENCE ONLY
Topographic Date:
1998, Bechtel Hanford, Inc.
Hanford Site
Unit Location
TSD Unit Boundary
DOE Operating Areas
Hanford Facility
Injection and Withdrawal Wells
Contours at 1 Meter Intervals
Depression Contours
SWMUs and Known Releases
Linear SWMUs and Known Releases
Spot SWMUs and Known Releases
Buildings
Structures
Concrete
Major Roads
Service Roads
Railroads
Fences
Meters
0 50 100 150 200
Feet
0 200 400 600
CMS

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WASHINGTON STATE DEPARTMENT OF ECOLOGY

Dangerous Waste Permit Application
Part A Form

Date Received	Reviewed by:	Date:	0	9	2	9	2	0	0	8
Month Day Year	Approved by:	Date:	0	9	2	9	2	0	0	8
0 9 2 5 2 0 0 8										

I. This form is submitted to: (place an "X" in the appropriate box)

- [X] **Request modification to a final status permit (commonly called a "Part B" permit)**
- [ ] **Request a change under interim status**
- [ ] **Apply for a final status permit. This includes the application for the initial final status permit for a site or for a permit renewal (i.e., a new permit to replace an expiring permit).**
- [ ] **Establish interim status because of the wastes newly regulated on:** (Date)

List waste codes:

II. EPA/State ID Number

W	A	7	8	9	0	0	0	8	9	6	7

III. Name of Facility

US Department of Energy – Hanford Facility

IV. Facility Location (Physical address not P.O. Box or Route Number)

A. Street

825 Jadwin

City or Town	State	ZIP Code
Richland	WA	99352

County Code (If known)	County Name
0 0 5	Benton

B. Land Type	C. Geographic Location Latitude (degrees, mins, secs)	Longitude (degrees, mins, secs)	D. Facility Existence Date Month	Day	Year
F	Refer to TOPO Map (Section XV.)		0 3	0 2	1 9 4 3

V. Facility Mailing Address

Street or P.O. Box

P.O. Box 450

City or Town	State	ZIP Code
Richland	WA	99352

VI. Facility contact (Person to be contacted regarding waste activities at facility)		
Name (last)	(first)	
Olinger	Shirley	
Job Title	Phone Number (area code and number)	
Manager	(509) 372-3062	
Contact Address		
Street or P.O. Box		
P.O. Box 450		
City or Town	State	ZIP Code
Richland	WA	99352

VII. Facility Operator Information	
A. Name	Phone Number
Department of Energy Owner/Operator Washington River Protection Solutions, LLC Co-Operator for 242-A Evaporator*	(509) 372-3062 (509) 372-9138*
Street or P.O. Box	
P.O. Box 450 P.O. Box 850*	
City or Town	State / ZIP Code
Richland	WA / 99352
B. Operator Type: F	
C. Does the name in VII.A reflect a proposed change in operator?	☐ Yes ☒ No Co-Operator* change
If yes, provide the scheduled date for the change:	Month: 10 Day: 01 Year: 2008
D. Is the name listed in VII.A. also the owner? If yes, skip to Section VIII.C.	☐ Yes ☒ No

VIII. Facility Owner Information	
A. Name	Phone Number (area code and number)
Shirley J Olinger, Operator/Facility-Property Owner	(509) 372-3062
Street or P.O. Box	
P.O. Box 450	
City or Town	State / ZIP Code
Richland	WA / 99352
B. Owner Type: F	
C. Does the name in VIII.A reflect a proposed change in owner?	☐ Yes ☒ No
If yes, provide the scheduled date for the change:	Month: Day: Year:

IX. NAICS Codes (5/6 digit codes)

A. First		B. Second	
562211	Waste Treatment & Disposal	924110	Administration of Air & Water Resource & Solid Waste Management Programs
C. Third		**D. Fourth**	
54171	Research & Development in the Physical, Engineering, & Life Sciences		

X. Other Environmental Permits (see instructions)

A. Permit Type	B. Permit Number	C. Description
E	AIR 04-8120	WAC 246-247, NOC Rad Air
E	TSCA 06-08-04	40 CFR 761, TSCA RBDA Approval letter from L. J. Iani (EPA Region 10 Adminstator) to J. B. Hebdon and J. E. Rasmussen (DOE) dated 6/8/04
E	A4041	Petroleum Underground Storage Tank License

XI. Nature of Business (provide a brief description that includes both dangerous waste and non-dangerous waste areas and activities)

The 242-A Evaporator is used to treat and store mixed waste from the DST System. Two waste streams leave the 242-A Evaporator following the treatment process: a concentrated slurry waste stream that is routed to the DST System; and a process condensate waste stream that is routed to the Liquid Effluent Retention Facility.

The waste fed to the 242-A Evaporator is regulated as a mixed waste with the same waste constituents as the waste in the DST System. The concentrated slurry is a characteristic waste (D001, D002, and D003), toxic waste (D004 through D011, D018, D019, D022, D028 through D030, D033 through D036, D038 through D041, and D043), nonspecific source waste (F001 through F005 and F039), and state-only characteristic waste (WT01, WT02, WP01, WP02. Multi-source leachate (F039) is included as a waste derived from nonspecific source waste F001 through F005.

The process condensate is regulated as a mixed waste due to the toxicity of ammonia (WT02) and because it is derived from the waste with a nonspecific source wastes F001 through F005. Multi-source leachate (F039) is included as a waste derived from nonspecific source waste F001 through F005.

The list of dangerous waste constituents under Section XIV.A includes constituents that have not been detected in the waste; however, knowledge of the processes providing the waste to the 242-A Evaporator indicates the strong possibility that these constituents are present in the waste or there is a potential for treating these constituents in the future. The annual waste quantity listed under Section XIV.B was calculated using an operating schedule of 365 days per year, a maximum pumping rate of 655 liters/minute (173 gpm), and a specific gravity of 2.0 for the waste. This calculation was done to provide a maximum estimate of annual waste quantity.

T04

The 242-A Evaporator began waste management operations in March of 1977. The 242-A Evaporator is located in the 200 East Area and is used to treat mixed waste from the Double-Shell Tank (DST) System by removing water and most volatile organics. Two waste streams leave the 242-A Evaporator following the treatment process. The first stream, the concentrated slurry (approximately 40 to 60 percent of the water is removed during evaporation along with a portion of volatile organics), is pumped back into the DST System. The second waste stream, process condensate (containing a portion of the volatile organics removed from the mixed waste during the evaporation process), is routed through condensate filters before release to a retention basin (Liquid Effluent Retention Facility). Off gasses from the process are routed through a de-entrainment unit, a prefilter, and high-efficiency particulate air filters before being discharged to the environment. The 242-A Evaporator is used to treat up to 943,000 liters (~249,000 gallons) of mixed waste per day, based on the 655 liters/minute (173) gpm capacity of the spare feed pump for AW-102.

S02

Tank C-100, a 4.3-meter (14-foot) diameter by 5.9-meter (19-foot) high tank with a maximum design capacity of 67,380 liters (17,800 gallons) is located in the condensate room. Process condensate from the primary, inter-, and after-condensers drain by gravity to tank C -100, which is constructed of stainless steel. In addition, tank C-100 receives potentially contaminated drainage from the vessel vent system via a 102 -liter (27 gallon) seal pot.

Tank C-A-1 is located in the evaporator room and consists of two sections: the lower (liquid) section, a 4.3-meter (14-foot) diameter stainless steel shell, and an upper (vapor) section, a 3.5-meter (11.6-foot) diameter stainless steel shell, containing two wire-mesh de-entrainment pads for the removal of liquids and solids that could be carried into the vapor header. Process slurry from the reboiler discharges to the evaporator vessel (tank C-A-1). Concentrated process slurry exits the lower section of tank C-A-1 via the 28-inch recirculating line. Vapor flows out of tank C-A-1 through a 42-inch vapor line at the top. The maximum design capacity of tank C-A-1 is 103,217 liters (27,267 gallons).

EXAMPLE FOR COMPLETING ITEMS XII and XIII (shown in lines numbered X-1, X-2, and X-3 below): A facility has two storage tanks that hold 1200 gallons and 400 gallons respectively. There is also treatment in tanks at 20 gallons/hr. Finally, a one-quarter acre area that is two meters deep will undergo *in situ vitrification*.

Section XII. Process Codes and Design Capacities								Section XIII. Other Process Codes							
Line Number		A. Process Codes (enter code)			B. Process Design Capacity 1. Amount	B. Process Design Capacity 2. Unit of Measure (enter code)	C. Process Total Number of Units	Line Number		A. Process Codes (enter code)			B Process Design Capacity 1. Amount	B Process Design Capacity 2. Unit of Measure (enter code)	C. Process Total Number of Units	D. Process Description
X	1	S	0	2	1,600	G	002	X	1	T	0	4	700	C	001	In situ vitrification
X	2	T	0	3	20	E	001									
X	3	T	0	4	700	C	001									
	1	T	0	4	943,000	V	001		1							
	2	S	0	2	170,597	L	002		2							
	3								3							
	4								4							
	5								5							
	6								6							
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2	4							2	4							
2	5							2	5							

XIV. Description of Dangerous Wastes

Example for completing this section: A facility will receive three non-listed wastes, then store and treat them on-site. Two wastes are corrosive only, with the facility receiving and storing the wastes in containers. There will be about 200 pounds per year of each of these two wastes, which will be neutralized in a tank. The other waste is corrosive and ignitable and will be neutralized then blended into hazardous waste fuel. There will be about 100 pounds per year of that waste, which will be received in bulk and put into tanks.

Line Number	A. Dangerous Waste No. (enter code)	B. Estimated Annual Quantity of Waste	C. Unit of Measure (enter code)	D. Processes (1) Process Codes (enter)									(2) Process Description [If a code is not entered in D (1)]
X1	D 0 0 2	400	P	S 0 1	T 0 1								
X2	D 0 0 1	100	P	S 0 2	T 0 1								
X3	D 0 0 2												Included with above
1	D 0 0 1	687,702,298	K	T 0 4									
2	D 0 0 2		K	T 0 4									
3	D 0 0 3		K	T 0 4									
4	D 0 0 4		K	T 0 4									
5	D 0 0 5		K	T 0 4									
6	D 0 0 6		K	T 0 4									
7	D 0 0 7		K	T 0 4									
8	D 0 0 8		K	T 0 4									
9	D 0 0 9		K	T 0 4									
10	D 0 1 0		K	T 0 4									
11	D 0 1 1		K	T 0 4									
12	D 0 1 8		K	T 0 4									
13	D 0 1 9		K	T 0 4									
14	D 0 2 2		K	T 0 4									
15	D 0 2 8		K	T 0 4									
16	D 0 2 9		K	T 0 4									
17	D 0 3 0		K	T 0 4									
18	D 0 3 3		K	T 0 4									
19	D 0 3 4		K	T 0 4									
20	D 0 3 5		K	T 0 4									
21	D 0 3 6		K	T 0 4									
22	D 0 3 8		K	T 0 4									
23	D 0 3 9		K	T 0 4									
24	D 0 4 0		K	T 0 4									
25	D 0 4 1		K	T 0 4									

EPA/State ID Number	W	A	7	8	9	0	0	0	8	9	6	7

Line Number	A. Dangerous Waste No. (enter code)	B. Estimated Annual Quantity of Waste	C. Unit of Measure (enter code)	D. Process (1) Process Codes (enter)	D. Process (2) Process Description [If a code is not entered in D (1)]
26	D043		K	T04	
27	WT01		K	T04	
28	WT02		K	T04	
29	WP01		K	T04	
30	WP02		K	T04	
31	F001		K	T04	
32	F002		K	T04	
33	F003		K	T04	
34	F004		K	T04	
35	F005		K	T04	
36	F039		K	T04	
37	D001	348,241	K	S02	
38	D002		K	S02	
39	D003		K	S02	
40	D004		K	S02	
41	D005		K	S02	
42	D006		K	S02	
43	D007		K	S02	
44	D008		K	S02	
45	D009		K	S02	
46	D010		K	S02	
47	D011		K	S02	
48	D018		K	S02	
49	D019		K	S02	
50	D022		K	S02	
51	D028		K	S02	
52	D029		K	S02	
53	D030		K	S02	
54	D033		K	S02	
55	D034		K	S02	
56	D035		K	S02	
57	D036		K	S02	
58	D038		K	S02	
59	D039		K	S02	
60	D040		K	S02	
61	D041		K	S02	
62	D043		K	S02	
63	WT01		K	S02	
64	WT02		K	S02	
65	WP01		K	S02	

EPA/State ID Number	W	A	7	8	9	0	0	0	8	9	6	7

Line Number	A. Dangerous Waste No. (enter code)	B. Estimated Annual Quantity of Waste	C. Unit of Measure (enter code)	D. Process (1) Process Codes (enter)			D. Process (2) Process Description [If a code is not entered in D (1)]
66	WP02		K	S02			
67	F001		K	S02			
68	F002		K	S02			
69	F003		K	S02			
70	F004		K	S02			
71	F005		K	S02			
72	F039		K	S02			
73							
74							
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100							

XV. Map

Attach to this application a topographic map of the area extending to at least one (1) mile beyond property boundaries. The map must show the outline of the facility; the location of each of its existing and proposed intake and discharge structures; each of its dangerous waste treatment, storage, recycling, or disposal units; and each well where fluids are injected underground. Include all springs, rivers, and other surface water bodies in this map area, plus drinking water wells listed in public records or otherwise known to the applicant within ¼ mile of the facility property boundary. The instructions provide additional information on meeting these requirements.

Topographic map is located in the Ecology Library

XVI. Facility Drawing

All existing facilities must include a scale drawing of the facility (refer to instructions for more detail).

XVII. Photographs

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment, recycling, and disposal areas; and sites of future storage, treatment, recycling, or disposal areas (refer to instructions for more detail).

XVIII. Certifications

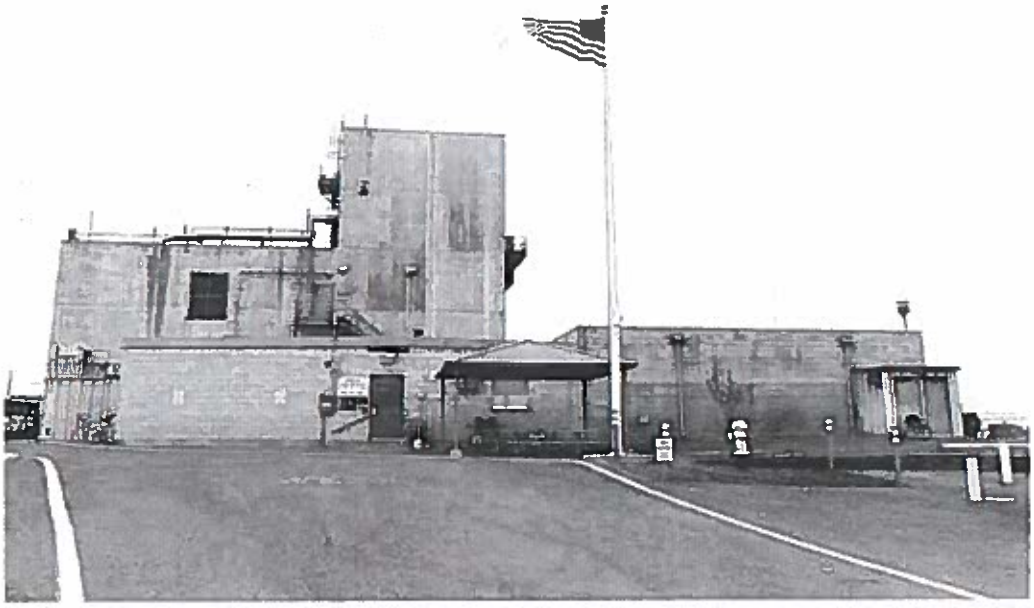
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Operator Name and Official Title (type or print)	**Signature**	**Date Signed**
Shirley J. Olinger, Manager U.S. Department of Energy Office of River Protection	Shirley J. Olinger	9/15/08
Co-Operator* Name and Official Title (type or print) William J. Johnson President and Project Manager Washington River Protection Solutions, LLC	**Signature** William J. Johnson	**Date Signed** 9/09/08
Co-Operator – Address and Telephone Number* P.O. Box 850 Richland, WA 99352 (509) 372-9138		
Facility-Property Owner Name and Official Title (type or print) Shirley J. Olinger, Manager U.S. Department of Energy Office of River Protection	**Signature** Shirley J. Olinger	**Date Signed** 9/15/08

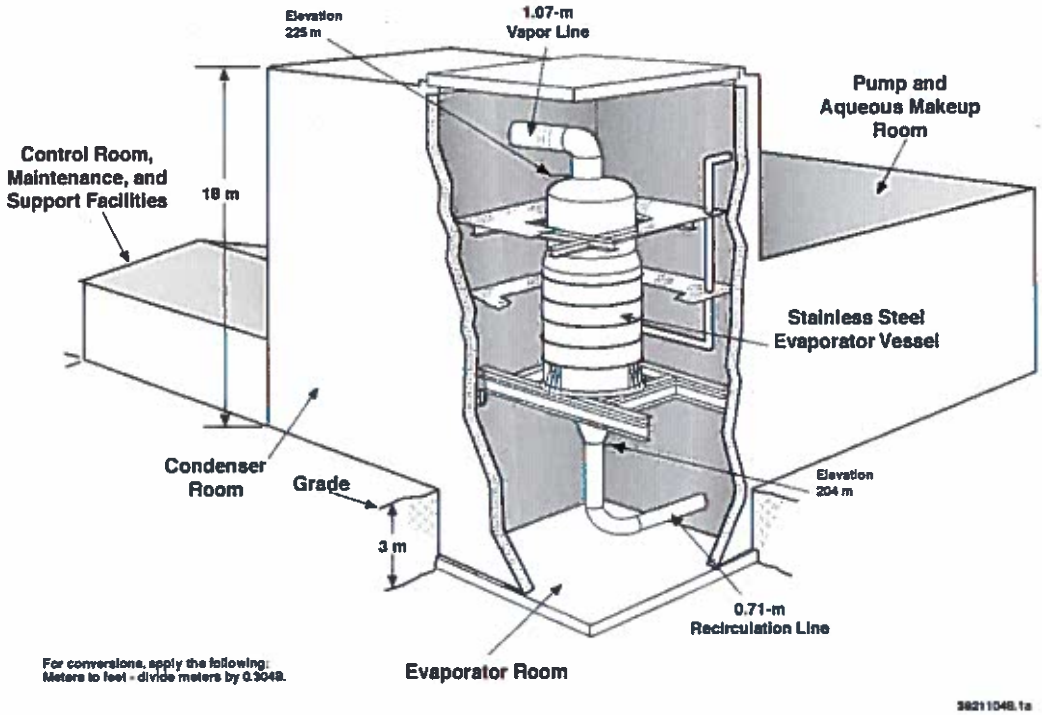
Comments

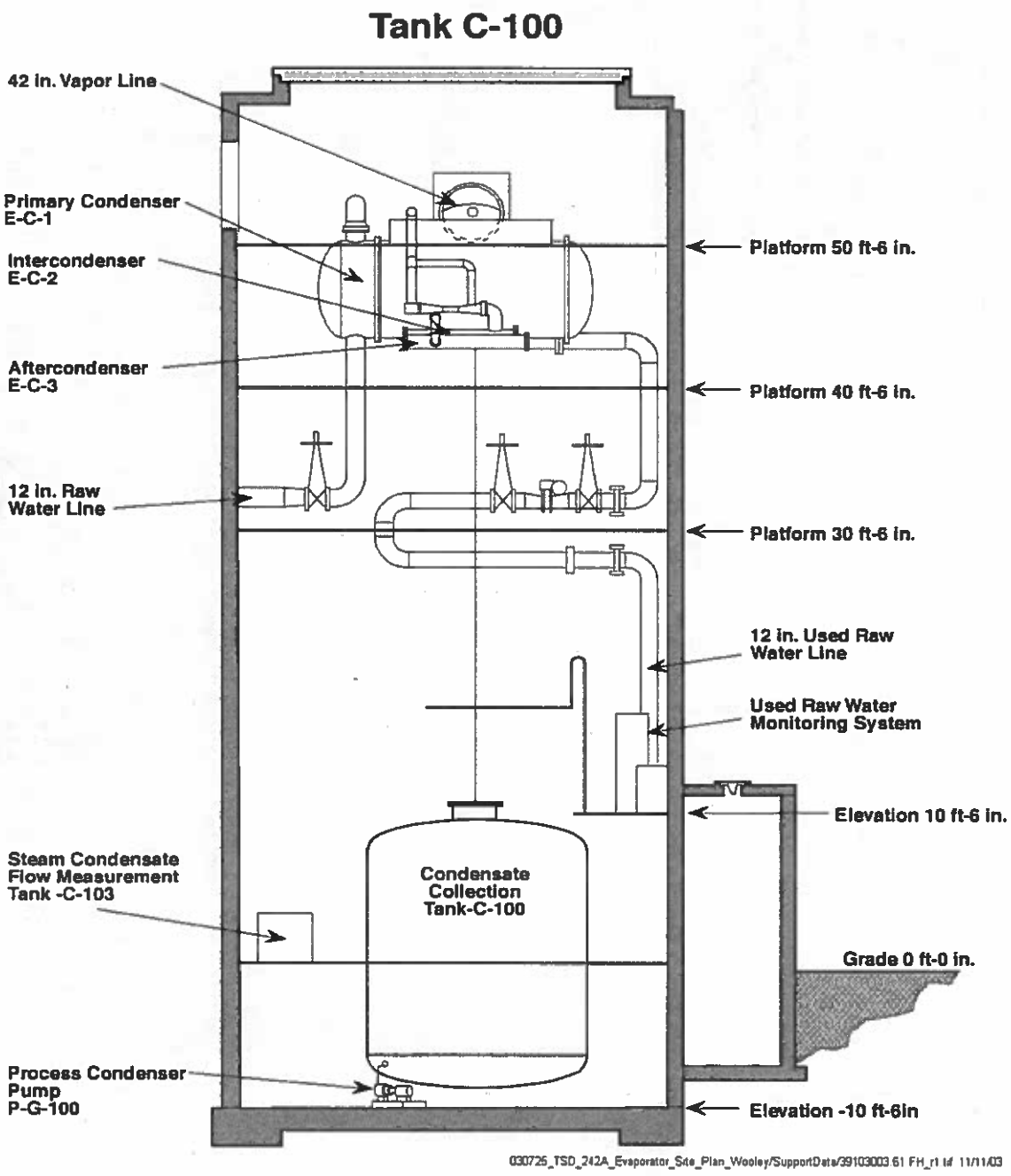
In Section VII, Facility Operator Information, there is no change to DOE as the Facility Owner/Operator; only a change in Co-Operator*. The change in Co-Operator* will be effective October 1, 2008.

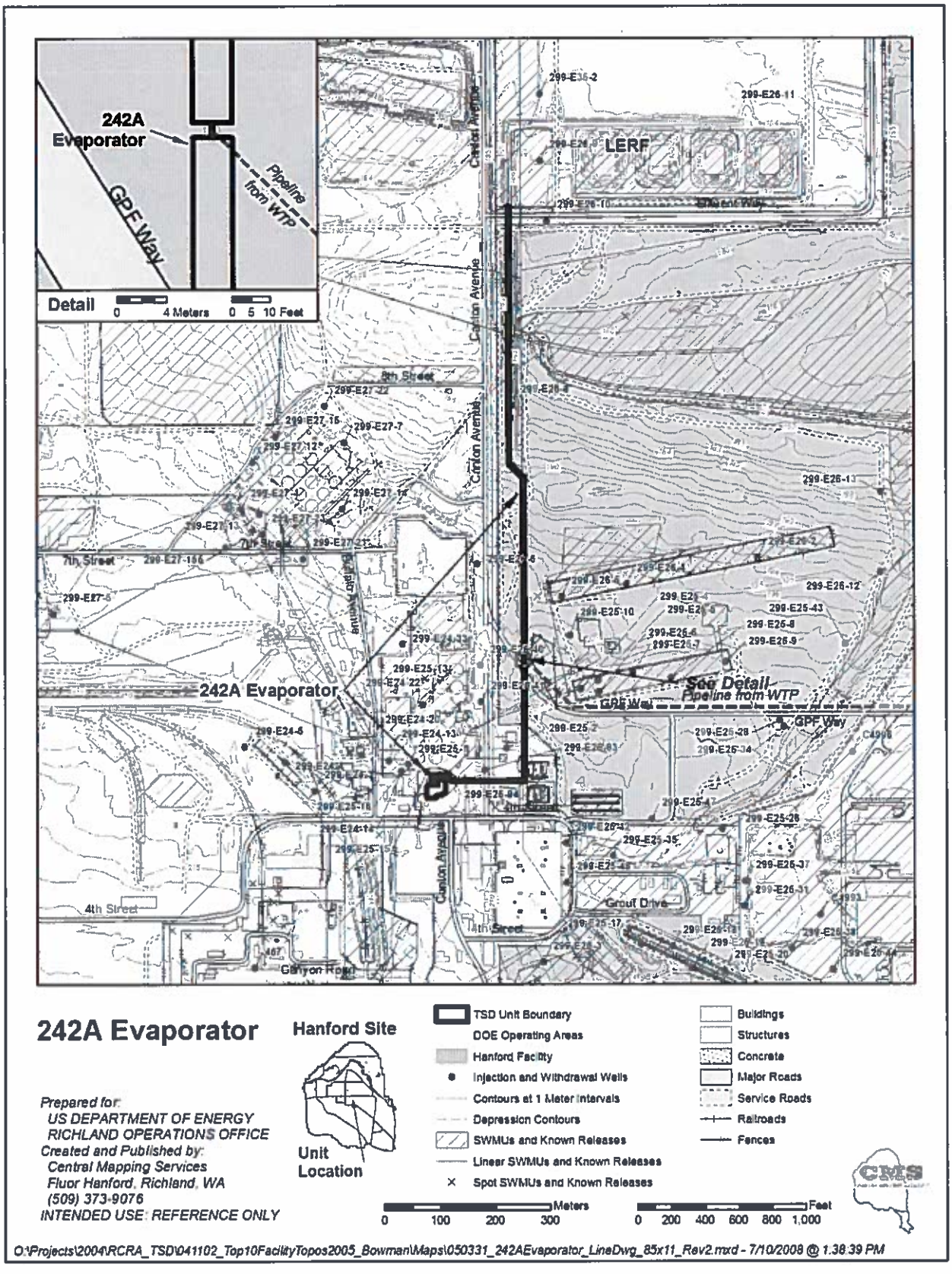
242-A Evaporator



96080579-19CN
Photo Taken 1996




Tank C-100
42 in. Vapor Line
Primary Condenser E-C-1
Intercondenser E-C-2
Aftercondenser E-C-3
12 in. Raw Water Line
Platform 50 ft-6 in.
Platform 40 ft-6 in.
Platform 30 ft-6 in.
12 in. Used Raw Water Line
Used Raw Water Monitoring System
Elevation 10 ft-6 in.
Steam Condensate Flow Measurement Tank -C-103
Condensate Collection Tank-C-100
Grade 0 ft-0 in.
Process Condenser Pump P-G-100
Elevation -10 ft-6in
030725_TSD_242A_Evaporator_Site_Plan_Wooley/SupportData/39103003.61 FH_r1 ld 11/11/03


242A Evaporator
GPF Way
Pipeline from WTP
Detail
0 4 Meters 0 5 10 Feet
LERF
Canton Avenue
7th Street
4th Street
Grout Drive
Canyon Road
See Detail
Pipeline from WTP
242A Evaporator
GPF Way
242A Evaporator
Hanford Site
Unit Location
Prepared for:
US DEPARTMENT OF ENERGY
RICHLAND OPERATIONS OFFICE
Created and Published by:
Central Mapping Services
Fluor Hanford, Richland, WA
(509) 373-9076
INTENDED USE: REFERENCE ONLY
TSD Unit Boundary
DOE Operating Areas
Hanford Facility
Injection and Withdrawal Wells
Contours at 1 Meter Intervals
Depression Contours
SWMUs and Known Releases
Linear SWMUs and Known Releases
Spot SWMUs and Known Releases
Buildings
Structures
Concrete
Major Roads
Service Roads
Railroads
Fences
Meters
0 100 200 300
Feet
0 200 400 600 800 1,000
CMS
O:\Projects\2004\RCRA_TSD\041102_Top10FacilityTopos2005_Bowman\Maps\050331_242AEvaporator_LineDwg_85x11_Rev2.mxd - 7/10/2008 @ 1:38:39 PM

Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

14-ESQ-0084

Mr. J. L. Boller
U.S. Environmental Protection Agency
Region 10
1200 Sixth Avenue, Suite 900, AWT-122
Seattle, Washington 98101

Dear Mr. Boller:

INFORMATION REQUESTED IN SUPPORT OF THE MAY 19 AND 20, 2014, U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) TREATMENT, STORAGE, AND DISPOSAL (TSD) UNITS AND WASTE GENERATOR ACTIVITIES INSPECTIONS OF THE HANFORD FACILITY RESOURCE CONSERVATION AND RECOVERY ACT ACTIVITIES

On May 19 and 20, 2014, EPA along with the State of Washington, Department of Ecology conducted TSD and waste generator activity inspections at the 400 Area Waste Management Unit, Centralized Consolidation/Recycle Center, 242-A Evaporator, and Waste Sampling and Characterization Facility West Central Waste Complex (CWC). During the May 21, 2014, inspection post-briefing EPA requested the following:

- Copies of documents that were identified during the inspections as enumerated in the list provided by EPA.
- Response to information requests from EPA during the TSD and Waste Generator Activity inspections.

The documents requested by EPA have been placed into an electronic format on three compact discs, one for each contractor responsible for the units that were inspected. Each disc contains an index or table of files that are contained on the disc.

If you have any questions, please contact me, or your staff may contact Ed MacAlister, Director, Environmental, Safety, and Quality, on (509) 373-0462.

Sincerely,

Jeffrey A. Frey, Acting Assistant Manager
for Safety and Environmental

ESQ:ACM

Enclosures

cc w/encls:
K. A. Conaway, Ecology
M. K. Prescott, EC
K. Schanilec, EPA Region 10
Administrative Record, TSD: S-4-2, T-2-6
Ecology NWP Library (CD)
Environmental Portal, LMSI, A3-01
HF Operating Record (J. K. Perry, MSA, H7-28)

cc w/o encls:
G. Bohnee, NPT
R. Buck, Wanapum
S. L. Dahl-Crumpler, Ecology
R. H. Engelmann, CHPRC
D. A. Faulk, EPA
L. E. Gadbois, EPA
S. Harris, CTUIR
J. A. Hedges, Ecology
S. Hudson, HAB
R. Jim, YN
K. McNeill, EPA Region 10
K. Niles, ODOE
D. Rowland, YN
J. R. Seaver, CHPRC
E. R. Skinnarland, Ecology

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)
INSPECTION OF THE 400 AREA AT THE HANFORD SITE
400 AREA WMU, 440-PAD, AND MASF
DOCUMENTS AND INFORMATION REQUEST TABLE
MAY 21, 2014

Inspection Request Number	Date of Inspection Request	EPA Document/Information Request	DOE/CHPRC Response to Document/Information Request	Number of Pages
400 Area Waste Management Unit - Interim Storage Area (ISA)				
1	05/21/2014	Waste Inventory (SWITS Data) for all containers within the connex box	Copies of the following "Solid Waste Information and Tracking System Container Listing Report" PINs for containers that are currently stored in the ISA:	
			• 0016549	4
			• 0043409	4
			• 0044912	4
			• 0044929	4
			• 0044930	4
			• 0046664	4
			• 0046665	4
			• 0049499	4
			• 0055593	4
			• 0063472	4
			• CP-12-11-F	4
			• CP-12-12-F	4
			• CP-12-13-F	4
			• CP-12-14-F	4
			• CP-12-15-F	4
			• CP-12-16-F	4
			• CP-12-17-F	4
			• CP-12-18-F	4
			• CP-12-19-F	4
2	05/21/2014	Waste Profiles (SWITS Data)	Copy of "400 Area WMU Waste Profile Sheet, "dated April 12, 2012.	4

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)
INSPECTION OF THE 400 AREA AT THE HANFORD SITE
400 AREA WMU, 440-PAD, AND MASF
DOCUMENTS AND INFORMATION REQUEST TABLE
MAY 21, 2014

Inspection Request Number	Date of Inspection Request	EPA Document/Information Request	DOE/CHPRC Response to Document/Information Request	Number of Pages
3	05/21/2014	Training Records (Individuals who perform the inspections)	The following are the Training Plans and Completion Dates for individuals that perform the inspections (Nuclear Chemical Operators): • Tim R. Malley • Deborah S. Older • Jose L. Ramos • Michael R. Reid • William M. Wise.	 4 3 4 4 4
4	05/21/2014	Inspections Log (Weekly inspection sheets going back 1 year – May 2013 to May 19, 2014)	Copies of 2CP-SUR-F-05024 "Hanford Facility RCRA Permit 400 Area Waste Management Unit – Weekly Inspection Log for 400 Area Waste Management Units," dated from May 7, 2013 through May 19, 2014.	56
5	05/21/2014	Building Emergency Plan	Copy of HNF-IP-0263-FFTF "Building Emergency Plan for Fast Flux Test Facility Property Protection Area," Revision 23, dated October 20, 2013.	32
6	05/21/2014	Shipping Records for last two years	***There have been no shipments of waste too or from the ISA in the last two years.***	N/A
7	05/21/2014	Container PIN # 0016549 NaK drum – Inside container photographs and description of the how much NaK liquid is present in the container	Container PIN # 0016549 NaK Container location, open container, and NaK liquid quantity within container.	1
400 Area Waste Management Unit - Fuel Storage Facility – Building 403 (FSF)				
8	05/21/2014	Waste Inventory (SWITS Data) for both large boxes stored within the FSF.	Copies of the following "Solid Waste Information and Tracking System Container Listing Report" PINs for containers that are currently stored in the FSF: • 23432-1 • 23432-2.	 4 4

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)
INSPECTION OF THE 400 AREA AT THE HANFORD SITE
400 AREA WMU, 440-PAD, AND MASF
DOCUMENTS AND INFORMATION REQUEST TABLE
MAY 21, 2014

Inspection Request Number	Date of Inspection Request	EPA Document/Information Request	DOE/CHPRC Response to Document/Information Request	Number of Pages
9	05/21/2014	Waste Profiles (SWITS Data)	Refer to response to Inspection Request Number 2.	N/A
10	05/21/2014	Training Records (Individuals who perform the inspections)	Refer to response to Inspection Request Number 3.	N/A
11	05/21/2014	Inspections Log (Weekly inspection sheets going back 1 year – May 2013 to May 19, 2014)	Refer to response to Inspection Request Number 4. ***Note: the FSF weekly inspection is on the same page as the ISA weekly inspection provided in Inspection Request Number 4.***	N/A
12	05/21/2014	Building Emergency Plan	Refer to response to Inspection Request Number 5.	N/A
13	05/21/2014	Shipping Records for last two years	***There have been no shipments of waste too or from the FSF in the last two years.***	N/A
440 - Pad Satellite Accumulation Area (SAA)				
14	05/21/2014	Waste Inventory Sheets for the two containers (PINs 0026112 and 0027876)	The following are the Waste Inventory Sheets for the containers located at the 440-Pad: • Waste Inventory Sheet, Container PIN 0026112, 55-Gallon Drum – Tritium Signs • Waste Inventory Sheet, Container PIN 0027876, 61 liter Container – Aerosol Cans.	2 2
Maintenance and Storage Facility (MASF) – Building 437 SAA and Universal Waste Storage Area				
15	05/21/2014	Training Records of the MASF Operations Manager	Training Plan for Michael A (Aaron) Young – MASF Operations Manager, as of May 28, 2014	5

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)
INSPECTION OF THE 400 AREA AT THE HANFORD SITE
400 AREA WMU, 440-PAD, AND MASF
DOCUMENTS AND INFORMATION REQUEST TABLE
MAY 21, 2014

Inspection Request Number	Date of Inspection Request	EPA Document/Information Request	DOE/CHPRC Response to Document/Information Request	Number of Pages
Other Documents Requested During the Inspection				
16	05/21/2014	Requested copy of letter from U.S. Department of Energy (DOE) to the Washington State Department of Ecology (Ecology), Subject: "Class 1 Modifications to the Hanford Facility Resources Conservation and Recovery Act Permit (Permit), Quarter Ending December 31, 2013," dated January 10, 2014.	Copy of letter from U.S. Department of Energy (DOE) to the Washington State Department of Ecology (Ecology), Subject: "Class 1 Modifications to the Hanford Facility Resources Conservation and Recovery Act Permit (Permit), Quarter Ending December 31, 2013," dated January 10, 2014. ***Note: The first section of this submitted HF RCRA Permit Class 1 Modification Package is the 400 Area WMU.***	43
17	05/21/2014	Requested copy of letter from DOE to Ecology, Subject: "Response to Washington State Department of Ecology (Ecology) Dangerous Waste Compliance Inspection at the Hanford 400 Area Dangerous Waste Management Unit Resources Conservation and Recovery Act (RCRA) Identification Number WA 7890008967 on September 19 and 20, 2011," dated August 5, 2013.	Copy of letter from DOE to Ecology, Subject: "Response to Washington State Department of Ecology (Ecology) Dangerous Waste Compliance Inspection at the Hanford 400 Area Dangerous Waste Management Unit Resources Conservation and Recovery Act (RCRA) Identification Number WA 7890008967 on September 19 and 20, 2011," dated August 5, 2013.	32

U.S. Environmental Protection Agency (EPA) List of Documents Requested

During the Inspection of the 400 Area on the Hanford Site

May 19, 2014

The following is a list of documents that the EPA requested during the 400 Area Inspections on May 19, 2014.

1. 400 Area Waste Management Unit
   - Interim Storage Area (ISA) – Connex Box
     - Waste Inventory (SWITS Data) for all containers within the connex box
     - Waste Profiles (SWITS Data)
     - Training Records (Individuals who perform the inspections)
     - Inspections Log (Weekly inspection sheets going back 1 year – May 2013 to May 19, 2014)
     - Building Emergency Plan
     - Shipping Records for last two years
       (Note: There have been no shipments of waste to the ISA in the last two years)
     - Container PIN # 0016549 NaK drum – Inside container photographs and description of the how much NaK liquid is present in the container
   - Fuel Storage Facility – Building 403 (FSF)
     - Waste Inventory (SWITS Data) for both large boxes stored within this facility
     - Waste Profiles (SWITS Data)
     - Training Records (Individuals who perform the inspections)
     - Inspection Logs (Weekly inspections going back 1 year – May 2013 to May 19, 2014)
     - Building Emergency Plan
     - Shipping Records
       (Note: There have been no shipments of waste to the FSF in the last two years)

2. 440 Pad Satellite Accumulation Area
   - Inventory Sheets for the two containers (PINs 0026112 and 0027876)

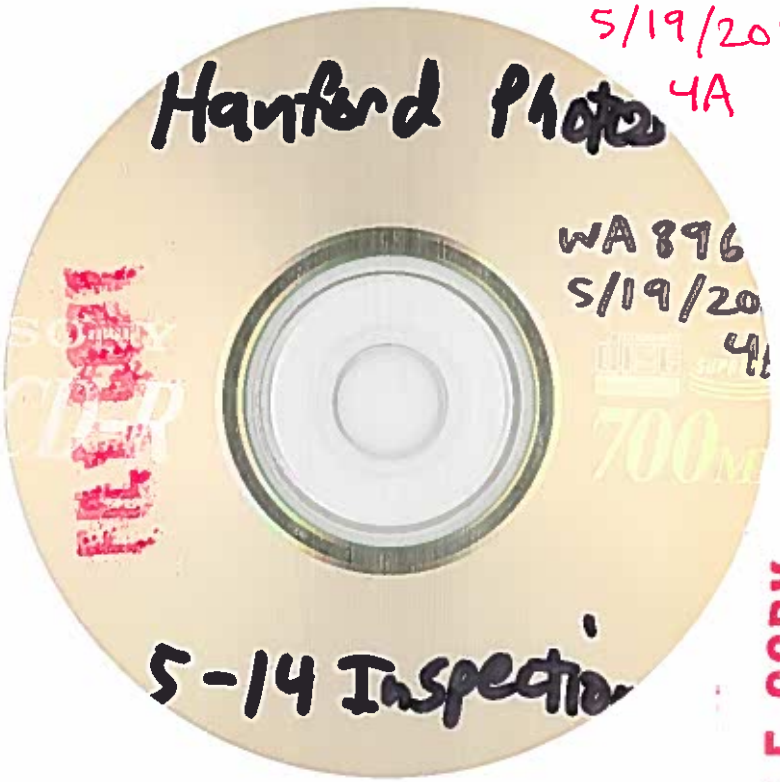
3. Maintenance and Storage Facility – Building 437
   - Satellite Accumulation Area and Universal Waste Storage Area
     - Training Records of the MASF Operations Manager

4. Other Information Request
   - Copy of Letter from DOE to Ecology, Subject: "Class 1 Modifications to the Hanford Facility Resources Conservation and Recovery Act Permit (Permit), Quarter Ending December 31, 2013," Dated January 10, 2014 (first section is Class 1 modifications to the 400 Area WMU).
   - Copy of Letter from DOE to Ecology, Subject: "Response to Washington State Department of Ecology (Ecology) Dangerous Waste Compliance Inspection at the Hanford 400 Area Dangerous Waste Management Unit Resources Conservation and Recovery Act (RCRA) Identification Number WA 7890008967 on September 19 and 20, 2011," dated August 5, 2013.

ATTACHMENT D
Document Disc

USDOE Hanford (400 Area, 242A evaporator, WSCF)
WA7890008967
May 2014 RCRA Inspection Report

WA 8967
5/19/2014
4A



WA 8967
5/19/2014
4A

EPA
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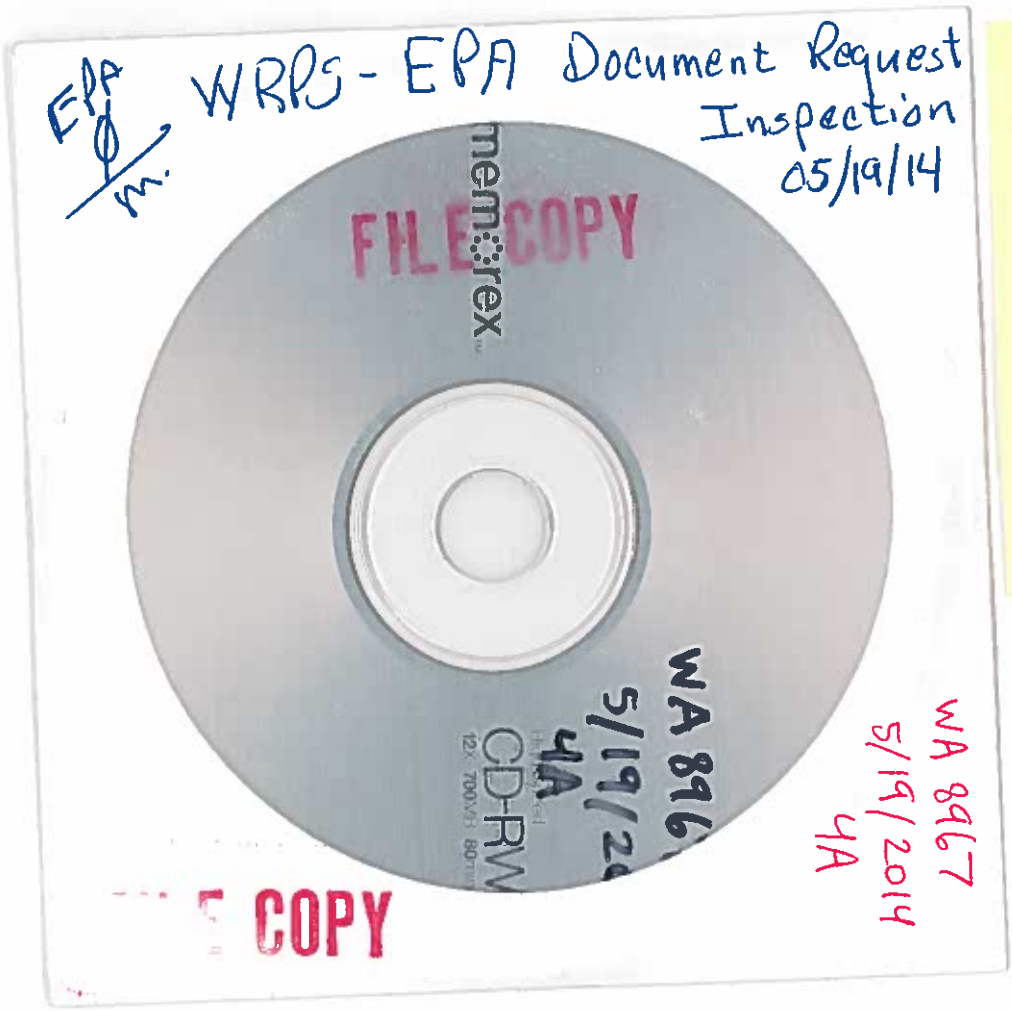
WRPS - EPA Document Request
Inspection
05/19/14



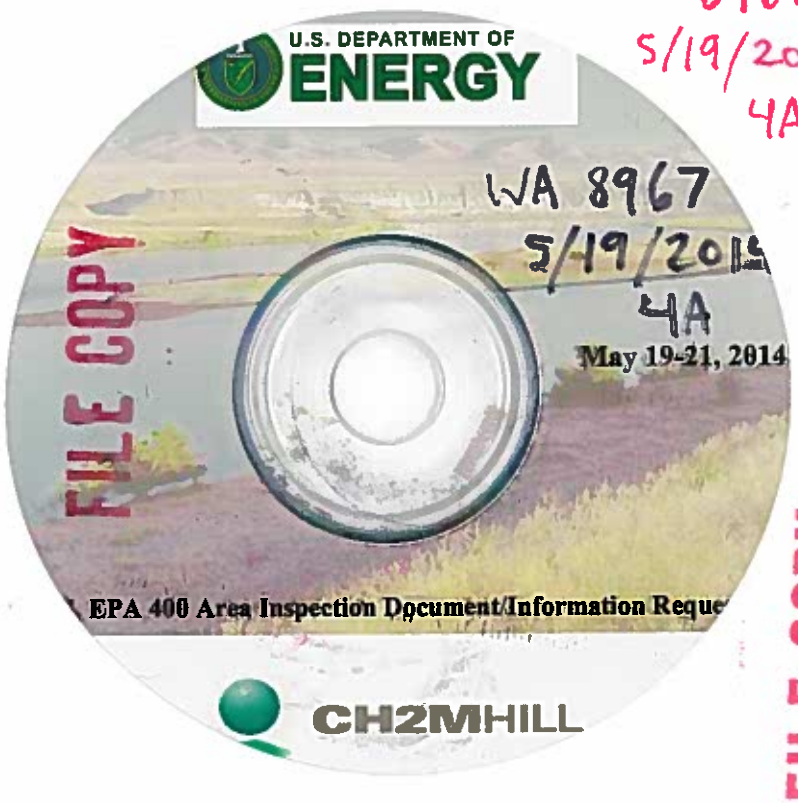
WA 8967
5/19/2014
4A

MSA Disc 2 WSCF, CCRC, [redacted]

WA 8967
5/19/2014
4A

FILE COPY

WA 8967
5/19/2014
4A



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